

# ABSTRACT

The invention relates to a magnesium compound effective in producing olefin polymers having an increased bulk density and a narrowed particle size distribution, not lowering the stereospecificity of the polymers produced and not lowering the polymerization activity in producing the polymers, to an olefin polymerization catalyst comprising the compound, and to a method for producing such olefin polymers. The olefin polymerization catalyst comprises (A) a solid catalyst component prepared by contacting a magnesium compound having a specific particle size distribution index (P), a titanium compound and an electron donor compound with each other, (B) an organometallic compound, and (C) an electron donor. The olefin polymerization method comprises polymerizing an olefin in the presence of the catalyst to give olefin polymers.